Energy Action Plan

KEY EAP GOALS

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Agenda for this talk

- Introduce the Energy Action Plan process
- Summarize key EAP II Goals
- Introduce AB 1007 Report process
- Answer questions

THE OLD WAY OF CEC-PUC COOPERATION

Dinner Diplomacy – Brave New Route for Public Policy

The Process

- In the beginning, there was SB 1389 (Bowen)
- SB 1389 begat the Integrated Energy Policy Report
- IEPR triggers Governor's Response
- Governor's Response guides Energy Action Plan

THE NEW WAY OF PUC-CEC COOPERATION

CALIFORNIA ENERGY COMMISSION

CALIFORNIA PUBLIC UTILITIES COMMISSION

NEW RESOURCES CONSISTENT WITH EAP LOADING ORDER

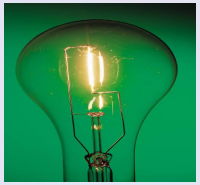
CEC IEPR

Governor's Response

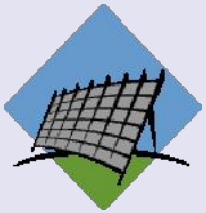
Policy

Implementation

Energy Action Plan



Energy Efficiency



Renewables

Fossil-Fueled

Goal I - Energy Efficiency

- EE first in “loading order” of new elec & gas resources
- Increase priority given to peak reduction
- Green Buildings (energy 20%↓ by 2015)
- Increase use of government incentives (grants, loans, etc.)
- Emphasize retrofits

GOAL: REDUCE PER CAPITA PEAK ELECTRICITY USE

Goal II - Demand Response

- Statewide Advanced Metering Infrastructure for res & small commercial customers
- Expedite adoption of time-differentiated tariffs for deployed meters
- Make dynamic pricing tariffs available for all customers

GOAL: FIVE PERCENT DEMAND RESPONSE BY 2007

Goal III - Renewables

- Approve contracts from initial & interim IOU RPS solicitations and approve any necessary supplemental energy payments
- Implement $3.2B program to achieve 3,000 MW goal of “Million Solar Roofs”
- Assure transmission availability
- Evaluate and develop implementation paths for RPS goals beyond 2010, including 33% by 2020, in light of cost-benefit and risk analysis, for all LSEs

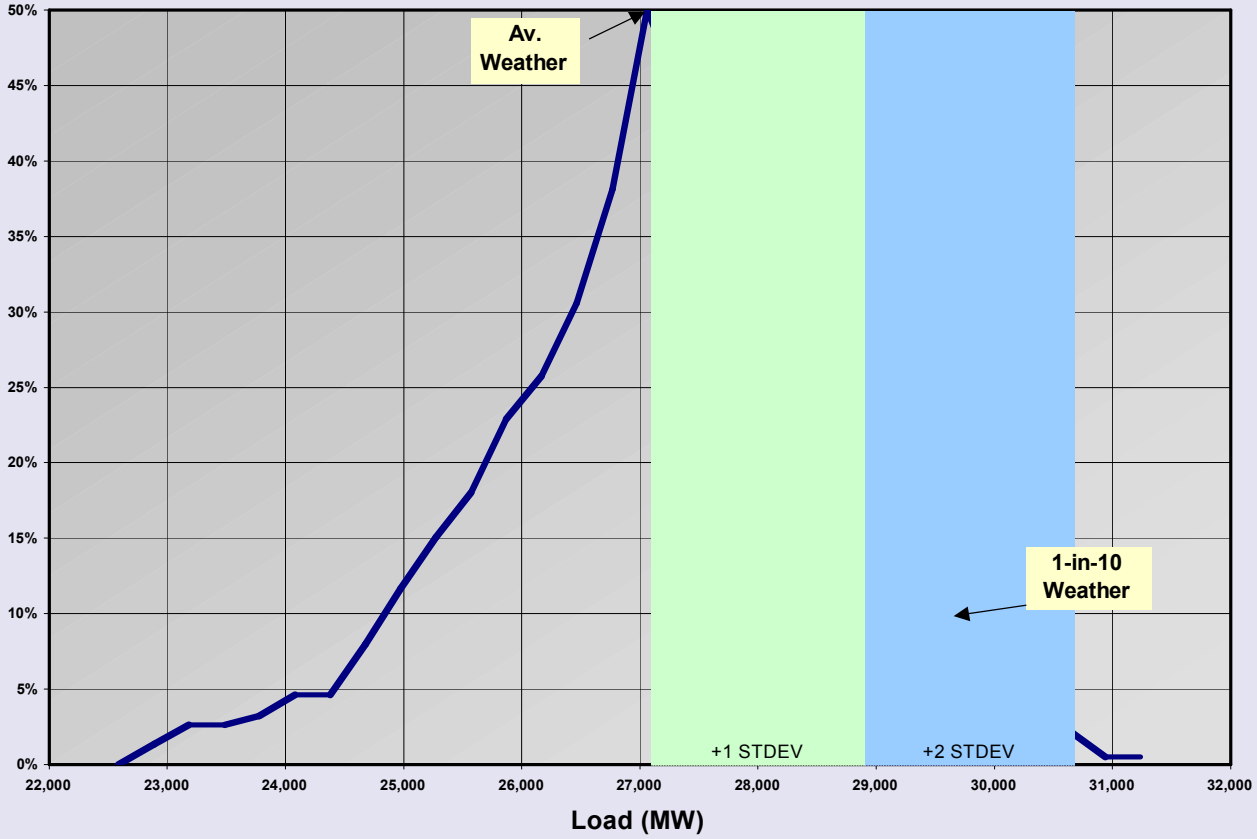
GOAL: RENEWABLES 20% BY 2010 AS FIRST STEP

Goal IV- Electricity Adequacy, Reliability and Infrastructure

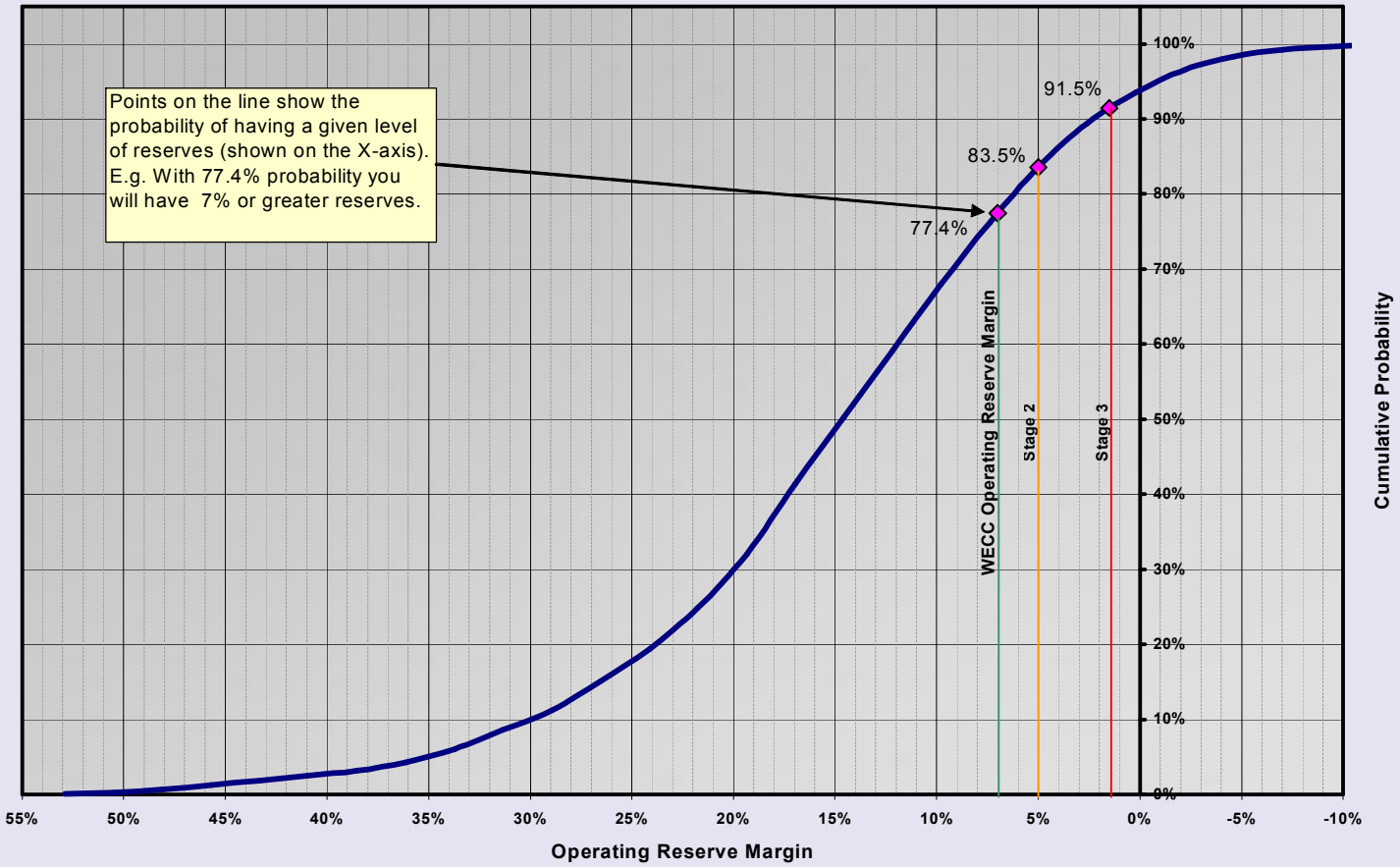
- Follow the loading order of energy resources
- Ensure all LSEs meet the state's adopted resource adequacy requirements of 15-17 percent planning reserve
- Recommend a California clean coal policy
- Integrate CEC, CAISO and CPUC TX planning, siting and rate functions
- Better evaluate strategic benefits and costs of TX, including discount rates
- Designate and preserve critical TX corridors

GOAL: LOADING ORDER; 15-17 PERCENT PLANNING RESERVE; DEVELOP EFFICIENT, RELIABLE, AND ENVIRONMENTALLY SOUND GENERATION.

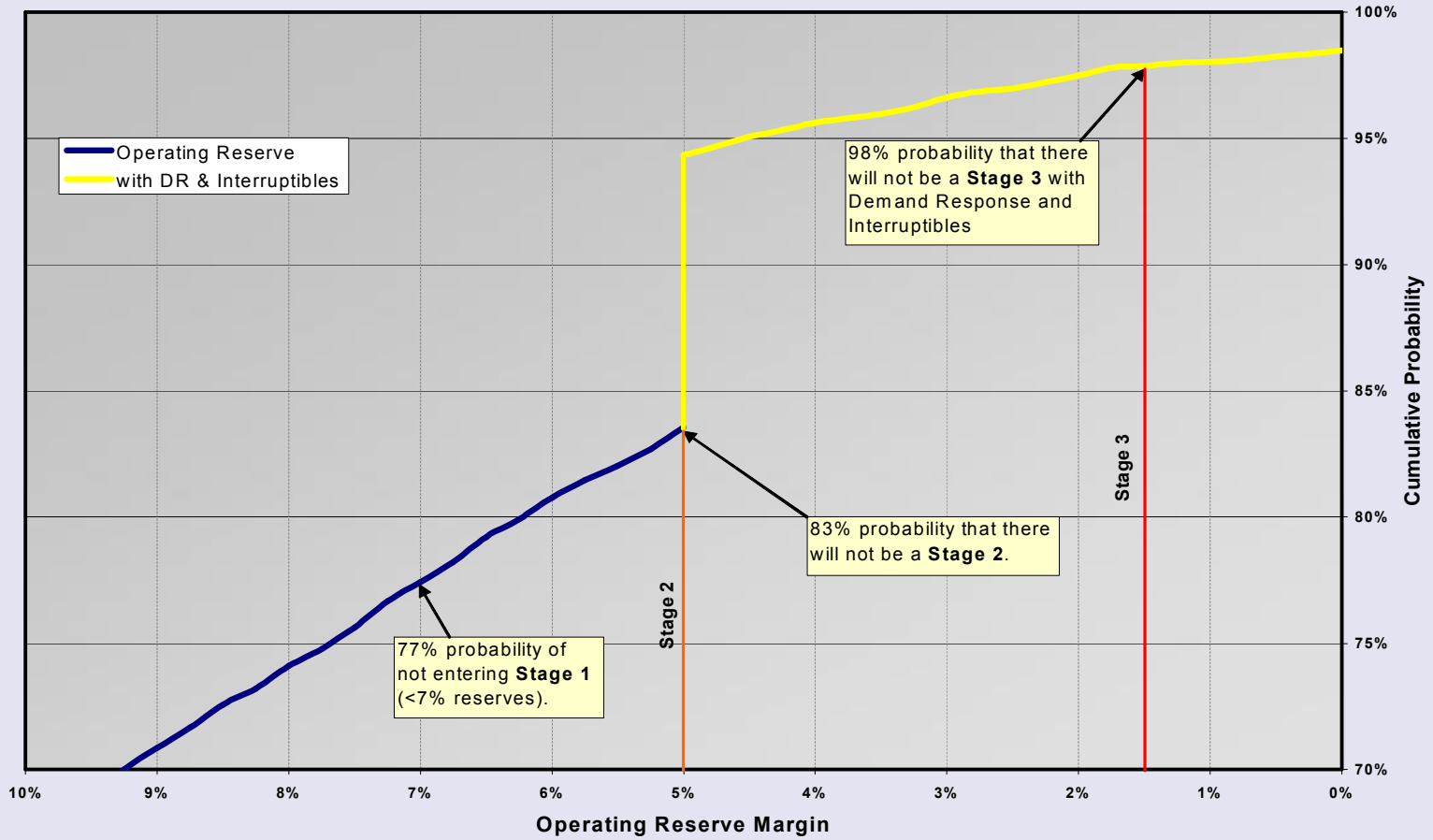
Probabilities
(Temperature)



Probability of Meeting Reserves



Probability of No Outages (with DR and Interruptibles)



Goal V- Electricity Market Structure

- Create more transparency in consumer electricity rates, base rates on clear cost-causation principles
- Complete transparent/timely/fair IOU procurement processes
- Develop rules to promote an effective core/non-core retail market structure

GOAL: CREATE TRANSPARENT, COMPETITIVE, AND FAIR PROCUREMENT/RATE PROCESSES AND MARKET STRUCTURES

Goal VI - Natural Gas

- Develop a process to facilitate the prompt and environmentally-sensitive evaluation and siting of needed LNG facilities
- Reduce reliance on natural gas for end uses
- Provide that the natural gas delivery and storage system is sufficient to meet California's peak demand
- Conduct ongoing assessments of global gas markets

GOAL: PROMOTE INFRASTRUCTURE ENHANCEMENTS AND DIVERSIFY FUEL SUPPLY SOURCES

Goal VII – RD&D

- Align RD&D funding with public policy goals for new renewable technologies and greenhouse gas mitigation technologies,including efficiency, renewable generation technologies, and energy storage
- Transform R&D projects on energy efficiency technologies into energy efficiency tools and standards
- Support clean coal technology research and development

GOAL: ALIGN RD&D FUNDING WITH PUBLIC POLICY GOALS

Goal IX - Climate Change

- Implement motor vehicle greenhouse gas regulations
- Climate Action Team report to the Governor
- Encourage all parties to participate in the California Climate Action Registry and to improve reporting of GHG emissions
- 30,000 MW of clean energy in the west

GOAL: IMPLEMENT GHG REGULATIONS AND IMPROVE EMISSIONS REPORTING

Goal VIII - Transportation

- Increase coordination of petroleum infrastructure permitting
- Establish tire rolling resistance standards
- Increase use of high-efficiency, fuel flexible vehicles, and dedicated non-petroleum-fueled vehicles in the state's fleet
- Develop a long term transportation fuels plan to increase the use of alternative fuels, increase vehicle efficiency, increase the use of mass transit, reduce dependence on petroleum fuels, and improve land use planning

GOAL: PROMOTE EFFICIENT, MULTI-FUEL TRANSPORTATION

2006 IEPR

- “Smart Growth”
- “Smart Communities”
- Fleets, programs
- http://www.energy.ca.gov/2007_energypolicy/index.html
- E-mail: lwhite@energy.state.ca.us

AB 1007 Report

- Goals: 20% Alternative Fuels by 2020
- Currently only Alternative Fuels Account for only 1% (Exception of Blended)
- Purpose of Report is: Implementation Plan & Milestones
- Purpose is NOT: to pick a winner

Seven Alternative Fuels

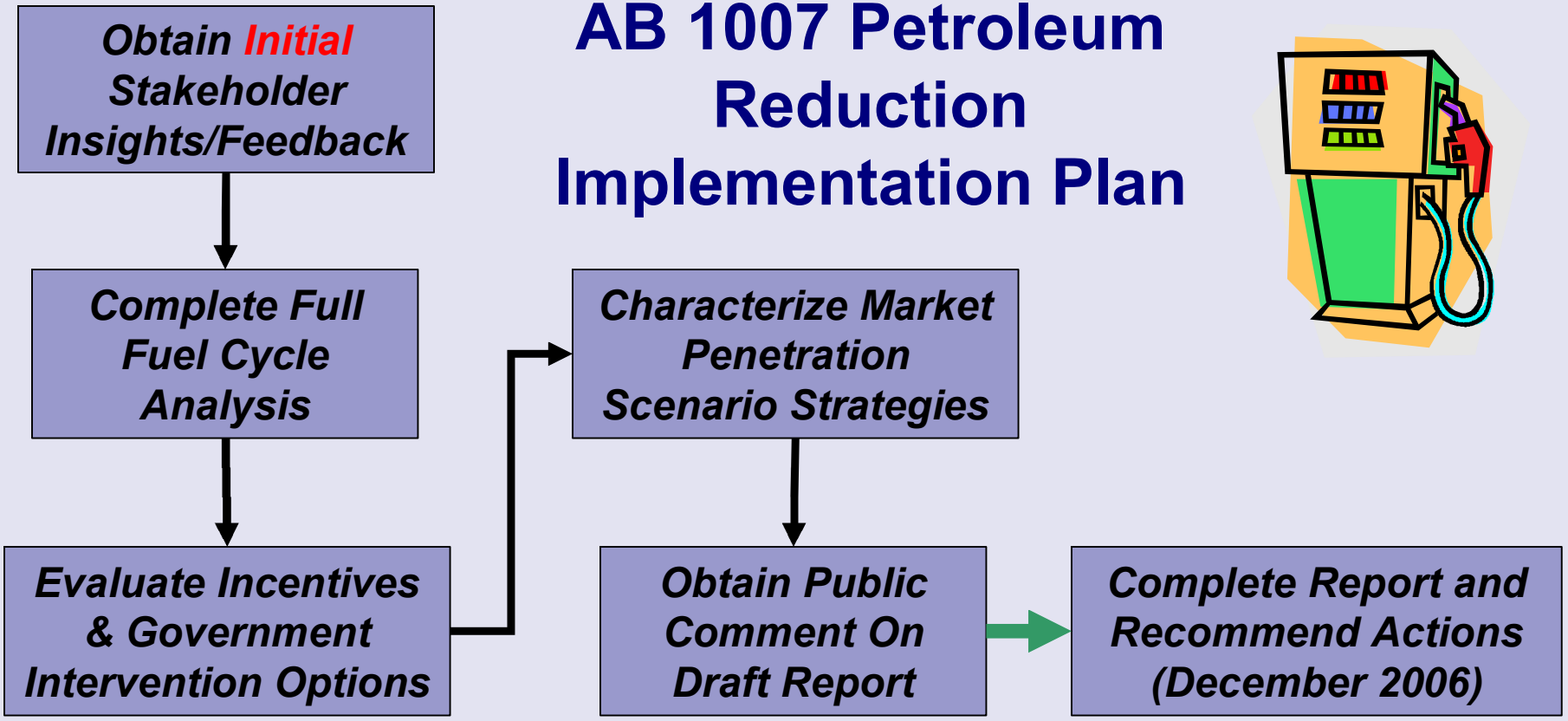
- Electricity and Electric Drive Train
- Ethanol
- Biodiesel
- Natural Gas
  - CNG
  - LNG
  - GTL
- Hydrogen
- ~~Methonal~~
- Propane

Sample Results

Sample Petroleum Displacement Options

Alternative Fuel Option		1007 - Cost-effectiveness of Displacement	Cumulative Benefit or Change[b] Present Value, 2005-2025, 5% discount rate With GHG Standards (Billion $2005)			
			A	B	C	A+B+C
			IEPR - Direct Non-Environmental Net Benefit[e]	IEPR - Direct Environmental Net Benefit	IEPR - External Cost of Petroleum Dependency	IEPR - Direct Net Benefit
Electric Battery Technologies (NEV and CEV)	0.10	¢/gal	1.11	0.07	0.04	1.22
Grid-connected Hybrid Electric Vehicles (HEV20)	0.53	¢/gal	0.62	0.32	0.19	1.13
Grid-connected Hybrid Electric Vehicles (HEV60)	0.71	¢/gal	(1.29)	0.47	0.25	(0.58)
CNG for Light-duty Vehicles (Honda Case)	0.02	¢/gal	(0.29)	0.01	0.01	(0.27)
CNG for Light-duty Vehicles (Honda and GM Case)	0.08	¢/gal	(0.94)	0.02	0.05	(0.87)
Ethanol Blend (E10 reduced price case)	0.48	¢/gal	0.00	1.98	0.53	2.51
Ethanol Hi-Content Blend (E85)	1.61	¢/gal	0.00	0.20	0.42	(0.62)
LNG and CNG for Medium and Heavy-duty Vehicles (Standard Case)[d]	0.23	¢/gal	(0.74)	0.03	0.12	(0.59)
Gas-to-Liquid (GTL) and Coal-to-Liquid (CTL) Fuels	1.64	¢/gal	0.00	0.10	0.77	0.87
Renewable Diesel (20%, $1.00/gallon federal tax subsidy)	1.00	¢/gal	0.00	0.96	0.52	1.48
Renewable Diesel (20%, $0.30/gallon federal tax subsidy)	1.00	¢/gal	0.00	0.96	0.52	1.48
Heavy-duty Hybrid Electric Vehicles (Aggressive Case)	0.05	¢/gal	(0.06)	0.03	0.01	(0.02)

AB 1007 Petroleum Reduction Implementation Plan



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- http://www.energy.ca.gov/ab1007/index.html

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